In the Claims:

1. (Currently Amended) In a wireless communication system comprising a Base Station connected with at least one mobile unit, a method of detecting the presence of a specific mobile unit in a coverage area of at least one neighboring Base Station, comprising:

the Base Station connected with the specific mobile unit provides, independently of the specific mobile unit, and independently of a strength of a signal received from the specific mobile unit by the Base Station connected with the specific mobile unit, to the at least one neighboring Base Station, information about the connection with the specific mobile unit, including rough TOD and a device address for the specific mobile unit;

at the at least one neighboring Base Station, receiving information and generating a list of frequencies in which the specific mobile unit is likely to transmit;

and at the at least one neighboring Base Station, checking for a signal transmitted by the specific mobile unit.

2. (Original) Method, according to claim 1, further comprising:

at the neighboring Base Station, monitoring frequencies that are not blocked by interferences.

3. (Original) Method, according to claim 2, further comprising:

for each frequency that is monitored, maintaining a histogram of a number of hops that have been detected in a certain duration of time, and their average signal-to-noise ratios.

4. (Original) Method, according to claim 3, further comprising:

determining a measure of spectral cleanness of a frequency being monitored as a function of signal-to-noise ratios (SNRs) of the hops.

5. (Original) Method, according to claim 4, further comprising:

monitoring a group (M) of frequencies that have a best cleanness measure most of the time.

6. (Original) Method, according to claim 5, further comprising:

periodically monitoring a frequency which is not in the group of frequencies having the best cleanness measure.

7. (Original) Method, according to claim 1, wherein the specific mobile unit is a device selected from the group consisting of:

telephone handset, standard cordless telephone handset, cellular telephone handset, personal data device, personal digital assistant (PDA), computer, laptop computer, e-mail server, a device utilizing point-to-point protocol (PPP) to the Internet via a central remote access server, a headset, a personal server, a wearable computer, a wireless camera, and a mobile music player.

8. (Original) Method, according to claim 1, further comprising:

providing communication links between the Base Stations, wherein the communication links between the Base Stations are selected from the group consisting of RF links and land lines; and

transferring connection status information and rough synchronization information between the Base Stations over the communications links.

9. (Original) Method, according to claim 1, wherein:

the Base Stations are connected via a wired or wireless local area network (LAN).

10 (Original) Method, according to claim 1, wherein:

the wireless communication system comprises a wireless private branch exchange (WPBX) handling calls from mobile units comprising handsets.

11. (Currently Amended) In a wireless communication system comprising a Base Station connected with at least one mobile unit, a method of detecting the presence of a specific mobile unit in a coverage area of at least one neighboring Base Station, comprising:

the Base Station connected with the specific mobile unit provides, independently of the specific mobile unit, directly to the at least one neighboring Base Station, information about the connection with the specific mobile unit, including rough TOD and a device address for the specific mobile unit;

at the at least one neighboring Base Station, receiving information and generating a list of frequencies in which the specific mobile unit is likely to transmit;

and at the at least one neighboring Base Station, checking for a signal transmitted by the specific mobile unit.